AN ANALYSIS OF TRAFFIC STOP DATA IN THE CITY OF RIVERSIDE

Submitted to the City of Riverside

by

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March 5, 2003

THE CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Second Printing

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This document reports on the analysis of traffic stop data for the Riverside Police Department. The data were collected for the calender year 2002 and represent all reported traffic stops in the City. The data were reported by individual officers who as a result of conducting traffic stops collected demographic information about drivers during stops and the actions taken as a result of the stop. The data were compiled by the Department into a database that was used to generate this report. The purpose of this study was to determine if the data pointed to any practices of racial profiling. Thus, the findings here examine the data and provide explanations of any patterns that emerged as a result of the analysis. This report provides discussions, analyses, and data that were used to generate this report. The first section of this report provides some background on the issue of racial profiling in general and the previous analysis from 2002.

INTRODUCTION

The current study was conducted in Riverside, California. This study was prompted by a stipulated judgment between the City and the California Office of the Attorney General. The judgment contained a number of changes within the Riverside Police Department affecting administrative and personnel areas. One of the judgment's requirements was that the police department continue to collect and analyze its traffic stop data for a period of five years to determine if any patterns emerged that point to racial profiling. Racial profiling has been defined by the State of California as,

> . . . the practice of detaining a suspect based on a broad set of criteria which casts suspicion on an entire class of people without any individualized suspicion of the

particular person being stopped.

Thus, this study examined traffic stops to determine if there were any patterns of stops where the preponderance of stops were based on race/ethnicity or gender.

This document reports on the second year of data analysis. Analysis began last year with an examination of the 2001 data, and that report was issued on March 5, 2002. This report essentially followed the methodology developed during the first report. There was scant research and literature on racial profiling at the beginning of this project in 2001. Thus, after careful consideration of police operations, a methodology was developed. Since the initiation of this project, however, there have been a number of studies and scholarly articles examining the issue of racial profiling. A number of these studies have been examined with an effort to see if the methodology used in Riverside could be improved. Essentially, it was determined that the methodology used here was the optimal methodology given the social setting for Riverside. Indeed, the methodology used here is consistent with studies in other jurisdictions including San Diego and Sacramento.

It should be noted that there most likely is a need to match methodologies with the social setting of the area being studied when examining traffic stop data. A review of the literature identifies three distinct types of social settings where traffic stop data analyses have occurred: (1) interstate highways or freeways, (2) suburban communities in close proximity to urban centers, and (3) independent urban centers.

The racial profiling issue came to light with studies in New Jersey and Maryland. In those states, the state police organizations were accused of stopping minorities, particularly African-Americans, at a disproportionately higher rate on the New Jersey Turnpike and

Interstate 95 respectively. Troopers in those states were engaged in drug courier profiling and were attempting to interdict drugs passing through or into the states. The drug courier profile they used resulted in a disproportionately higher number of African-Americans being stopped and searched.

The social setting for the New Jersey and Maryland issues were interstate highways or freeways. This represents a unique social setting with a distinctive type of motorists. The universe of motorists included travelers who were on extended journeys and people traversing from one city to another. The samples of the population of drivers that were drawn as a result of the traffic stops was extremely fluid and subject to change over time and seasonally.

The enforcement and stopping patterns of police officers were also unique compared to other social settings. Here, officers were focusing on one unique problem, drug trafficking and transportation, so they selected to stop individual motorists who met the drug transportation profile. In essence, the social setting and enforcement patterns generally were different from those exhibited in suburban communities in close proximity to urban centers and independent urban centers.

The second type of social setting, suburban communities in close proximity to urban centers, represents another unique social and enforcement phenomenon. Only one study of this type of social setting is presently available. Meehan and Ponder of Oakland University examined the traffic stop patterns in a predominately White city in Michigan. The city shared a border with a predominately African-American city, and thus, the social setting is indicative of many segregated urban-suburban metropolises in the United States. The researchers found that ecology or social setting affected how officers conducted traffic stops. That is, the officers in the

predominately White city stopped African-Americans and placed them under surveillance at a much higher rate than White drivers, especially those African-Americans entering the suburban city from the predominately African-American urban areas. The traffic stop patterns here could be characterized as classic "driving while black" stops. The police are more attentive to outside minority drivers coming into the predominately White city.

This social setting seems to foster a different kind of enforcement pattern. Perceptually, the police appear to have adopted a watchman style orientation toward outsiders, especially minorities, in an effort to combat crime. They tend to see these outsiders as being criminogenic predators who are responsible for a large portion of crime in their city. The officers adopt tactics that they feel best protect residents from the outsiders. This results in these outsiders, who are predominately minority, being stopped at greater rates. Obviously, the homogeneous population contributes significantly to these perceptions.

Finally, independent urban centers are cities that for the most part are self-contained with an ample supply of all necessary services. This best characterizes the City of Riverside. Riverside is the county seat and is the primary urban hub for the county. Rather than being involved in freeway interdiction or being concerned with possible offenders from other jurisdictions, officers tend to focus on problems within the City's boundaries. Officers tend to be concerned with crime, drug, gun, and gang problems as they occur in Riverside. Riverside officers seem to use problem solving and proactive police tactics to counter perceived, significant crime problems. This hypothesis was to a large extent supported by the data from the first year's analysis.

This discussion on the types of ecological conditions or social settings for traffic stop

data analysis is presented in an effort to provide context to the current study. That is, although problems have been found in other jurisdictions, the social ecology in some of those jurisdictions is somewhat different from Riverside. Thus, it is inaccurate to generalize problems or findings from other agencies to Riverside.

It is also important to reiterate that more active police tactics, especially in high crime areas, constitute normative behavior by police departments. Nationally, police departments have adopted problem solving, a key component of community policing, which results in officers applying stricter enforcement in problem areas. In recent years, Riverside has developed a significant drug and gang problem as indicated by the number of assaults and homicides. One of the police responses has been enhanced enforcement.

The following section of this report discusses the methodology used to conduct the second year traffic stop data analysis in Riverside.

METHODOLOGY

The source of data for this analysis is all traffic stops conducted by the Riverside Police Department. When officers make a traffic stop, they provide information or data to the dispatcher who keys the information into a database. Officers have been trained on the system and use established codes to provide data on the following elements: (1) driver's race or ethnicity, (2) driver's gender, (3) broad categories as to the rationale for the stop, (4) disposition of the stop, (5) whether a search was conducted, and (6) whether the search result in the discovery of evidence or contraband. These elements constitute the primary data used for the analysis in this report.

Once the data were collected, it was provided to the researcher by the Riverside Police

Department's Attorney General Compliance Task Force Unit. The researcher then worked closely with members of the unit to examine the data and to ensure that data's accuracy. Unit personnel provided explanations and definitions as to the meaning of the data collected in the database.

The methodology used in this report follows the methodology used in the first year analysis. It should be noted that a comprehensive review of the literature was conducted to determine if other data should be collected or other analyses be calculated. Based on this review of the literature, it was determined that the current methodology is consistent with that which is known about traffic stop data analysis.

The analysis essentially consisted of three steps. First, the department's overall stops were examined. Second, the total stops were dis-aggregated into stops by traffic officers and pretextual or investigative stops performed primarily by patrol. Each grouping was then analyzed separately. Third, when disparities were identified, explanations for them were investigated. It should be noted that different levels of enforcement do not necessarily constitute racial profiling. There are a number of competing explanations, which should be investigated.

EXAMINATION OF OVERALL TRAFFIC STOP TRENDS

One of the first steps in this year's analysis was to determine if there had been any changes in the overall patterns of traffic stops in the Riverside Police Department. In some cases, when a department implements a new program or an event that profoundly affects the department occurs, officers tend to begin to de-enforce the laws. That is, they tend to withdraw from certain police activities. Thus, it is important to see if officers altered their traffic stop activities as a result of the first year of the program.

Table 1 provides a breakdown of the traffic stops for the Riverside Police Department for the years 2001 and 2002.

Table 1

Annual Comparison of Traffic Stops

	2001	2002	% Change
Total Stops	21,672	23,872	10.1
Patrol	15,606	13,973	-10.4
Traffic	6,066	9,899	63.1

The number of stops conducted by the Riverside Police Department increased by 10.1 percent. In 2001, there were 21,672 stops, and in 2002, there were a total of 23,872 stops for an increase of 2,200 stops. Table 1 indicates that the increase in traffic stops was attributable to the traffic unit, and traffic stops conducted by patrol actually decrease about 10.4 percent. Patrol officers conducted 1,633 fewer stops in 2002 than they did in 2001.

As noted, there was a significant increase in the number of stops performed by the traffic unit. Officers in this unit performed 3,833 more traffic stops in 2002 as compared to 2001. No apparent reasons for this increase are present in the data. However, it was suggested by the staff that there had been a change in the command and supervision within the traffic unit, and this may have contributed to the change. Whether there was any disparity in the nature of the traffic stops is examined in later sections of this report.

The following section examines whether there is racial and ethnic parity with the traffic stops by all officers in the Riverside Police Department.

RACIAL PARITY OF OVERALL TRAFFIC STOP STATISTICS

In order to conduct an analysis as to whether parity across race and ethnic groups existed, population statistics were obtained. The most recent and accurate population statistics available are the 2000 census data. Although this information is about two years old, it remains the most reliable available. It should also be noted that one of the primary criticisms of the census data is that minorities are traditionally under-reported. This may skew the results of this study, but no other information is available to make reliable corrections.

The U.S. Census Bureau substantially changed how it collected data for the 2000 census. The California Department of Finance's Demographic Unit has examined the 2000 census data and broken the data out into more meaningful or useable categories. The census information shows that the City has a population of 255,166. Table 2 contains the population statistics as posted on the California State Census Data Center website.

Table 2

Census Information for the City of Riverside

Race or Ethnicity	Percentage of the Riverside Population
White	45.6
Hispanic	38.1
African-American	7.1
American Indian	0.6
Asian	5.6
Pacific Islander	0.3
Other	0.2
Two or More Races	2.6

Table 2 shows that a significant amount of racial and ethnic diversity exists within the City of Riverside. Although Whites constitute the largest single group (45.6%), they makeup less than half of the population. The next highest group is Hispanic, which constitutes 38.1 percent of the population. African-Americans, the third largest group, comprise 7.1 percent of the population. As a caveat to this research, it should be noted that it is likely that Hispanics and African-Americans are under represented in these statistics due to under reporting in the census data.

Table 3 provides a breakdown of the population and the number of traffic stops that were conducted.

Table 3

Total Traffic Stops by Population Percentages

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	45.6	9,865	41.3
Hispanic	38.1	9,511	39.9
African-American	7.1	3,029	12.7
American Indian	0.6	55	0.2
Asian	5.6	695	2.9
Pacific Islander	0.3	98	0.4
Other	0.2	619	2.6
Two or More Races	2.6	NA	

There were 23,872 traffic stops in the City of Riverside in 2002. The vast majority of those stops were of Whites, Hispanics, and African-Americans as indicated in Table 3. Of the three main categories of drivers being stopped by the police, it seems that Whites are slightly

under represented, Hispanics are slightly over represented, and African-Americans are significantly over represented. African-Americans represent 7.1 percent of the population and 12.7 percent of the total stops.

It is noteworthy that the proportion of African-Americans stopped has slightly declined. In 2001, African-Americans constituted 13.6 percent of all stops, while they makeup 12.7 percent of the stops in 2002. The relative proportion of Hispanics in the stop population has increased from 39.1 percent to 39.9 percent this year. Finally, in 2001, 41.2 percent of the stops were for Whites, and 41.3 percent for 2002 were for Whites. The most dramatic change in the relative percentages were for African-Americans, who declined by 0.9 percent from last year.

DIS-AGGREGATING TRAFFIC AND PATROL STOPS

A significant part of the research methodology developed last year was the dis-aggregation of stops made by traffic officers and patrol officers. It was reasoned that these two units make stops for different purposes. Traffic officers are concerned with traffic law enforcement with a primary purpose of reducing traffic crashes and expediting the flow of traffic. Therefore, they are primarily engaged in low discretion stops where violators are normally ticketed. Patrol, on the other hand, is engaged in high discretion stops where their intention often is to perform a cursory investigation. Such stops are often referred to as pretextual stops since patrol officers often stop motorists for a traffic violation with the purpose of conducting an investigation into other possible criminal activities. Pretextual stops by law enforcement has been reviewed by the United States Supreme Court in Whren v. U.S. (116 S.Ct. 1769, 1996). The Court ruled that such stops were permissible. Therefore, it is

informative to examine these two types of stops independently.

Traffic Stops Made By the Traffic Unit

Table 4 provides a breakdown of the traffic stops conducted by the Riverside Police Department's traffic unit. In addition to the number of stops, the population percentages for each racial and ethnic group are presented.

Table 4

Traffic Officer Stop by Population

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	45.6	4,566	46.1
Hispanic	38.1	3,717	37.5
African-American	7.1	948	9.6
American Indian	0.6	11	0.1
Asian	5.6	322	3.2
Pacific Islander	0.3	26	0.3
Other	0.2	309	3.1
Two or More Races	2.6	NA	

An examination of the data contained in Table 4 shows that the stops conducted by officers assigned to the traffic unit were fairly consistent with the population statistics. White drivers were over represented in the stops by 0.5 percent, and African-Americans were over represented by 2.5 percent. However, these differences for all practical purposes are insignificant. Thus, it can be concluded that there are no differences between racial and ethnic groups in terms of traffic unit enforcement. Furthermore, it was noted earlier in this report that traffic stops by traffic officers had increased by 63.1 percent from the previous year. It does

not appear that this increase had any affect on the proportionality of the racial and ethnic groups being stopped.

Another concern voiced relative to the racial profiling controversy relates to the number of minorities who are searched in relation to non-minority drivers. Traffic officers made a total of 33 searches out of a total of 9,899 traffic stops. Ten of the searches were for Whites, while one Asian, one East Indian, five African-Americans, and sixteen Hispanics were searched. Thus, the number of searches conducted by traffic officers is insignificant and cannot be analyzed or generalized. Six of the searches were conducted when the disposition of the stop was arrest, so it is likely that these searches were incidental to the arrest.

Another area of consideration is the disposition of traffic stops by the traffic officers. Table 5 provides a breakdown of the disposition of the traffic stops by race and ethnicity.

Table 5

Traffic Stops by Traffic Officers by Ethnicity and Disposition

Disposition	Asian		African-American		Hispanic		East Indian		Native American	
	Count	%	Count	%	Count	%	Count	%	Count	%
Arrest	1	0.3	12	1.3	56	1.5				
Cite	303	94.1	821	86.6	3379	90.9	139	94.6	10	90.9
Field Inter.			4	0.4	6	0.2			1	9.1
Release	17	5.3	111	11.7	275	7.4	8	5.4		
Report					1	0.0				
Supp. Report	1	0.3								

Table 5 is continued on the next page.

Table 5 Continued

Disposition	Other		Pacific Island		White		Total	
	Count	%	Count	%	Count	%		
Arrest					12	0.3	81	0.8
Cite	141	87.0	24	92.3	4069	89.1	8886	89.8
Field Inter.					17	0.4	28	0.3
Release	21	13.0	2	7.7	468	10.2	902	9.1
Report							1	0.0
Supp. Report							1	0.0

There are a number of blank cells in Table 5. This indicates that there were no citizens who received those dispositions. With only a few exceptions, the traffic officers cite or release those citizens they stop. A review of the cite percentages contained in the table shows that the citation rate ranged from a low of 86.6 percent to a high of 94.6 percent. The citation rate for African-Americans was 86.6 percent, Hispanics, 90.9 percent, and Whites, 89.1 percent. Thus, there is little difference in the rate of citations across race and ethnicity by the traffic officers.

Traffic Stops Made By the Patrol Unit

The next step in the analysis is to examine the traffic stops made by patrol. It should be noted that stops by other units, such as criminal investigation tactical operations, and drug enforcement, are included in the patrol stops, but their stops, for the most part, account for a insignificant number of the total patrol stops. All units other than traffic were combined since stops by non-traffic units were generally investigative in nature.

In 2002, there were 13,973 investigative stops, while in 2001, there were 15,606. Thus, in 2002, there was a decline of 1,633 stops. This represents a 10.4 percent reduction in the

number of patrol stops. Discussions with departmental staff about new policies, procedures, and programs did not reveal any explanation for the reduction.

Table 6 provides a breakdown of the patrol or investigative stops in relation to the racial and ethnic makeup of the City of Riverside.

Table 6

Patrol or Investigative Stops by Population

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	45.6	5,299	37.9
Hispanic	38.1	5,794	41.5
African-American	7.1	2,081	14.9
American Indian	0.6	44	0.3
Asian	5.6	373	2.7
Pacific Islander	0.3	72	0.5
Other	0.2	310	2.2
Two or More Races	2.6	NA	

As Table 6 indicates, African-Americans were stopped as the result of investigative stops at more than double their population in the City of Riverside. In 2001, African-Americans constituted 15.2 percent of all traffic stops by patrol; thus, the relative proportion of stops for African-Americans has actually declined slightly since 2001. In 2001, a total of 2,368 patrol stops were of African-Americans; so the aggregate number of African-Americans stopped in 2002 was 287 fewer as compared to 2001. This is consistent with the overall reduction in traffic stops for the period.

Another consideration when examining traffic stop data is the disposition of the traffic

stops. The possible dispositions as a result of a traffic stop are: (1) arrest, (2) citation, (3) field interview, and (4) release without further action. Table 7 provides a breakdown of the dispositions.

Table 7

Traffic Stops by Patrol Officers by Ethnicity and Disposition

Disposition	Asian		African-American		Hispanic		East Indian		Native American	
	Count	%	Count	%	Count	%	Count	%	Count	%
Arrest	3	0.8	88	4.2	291	5.0	2	1.0	5	11.4
Cite	141	37.8	512	24.6	1568	27.1	70	36.3	19	43.2
Field Inter.	1	0.3	24	1.2	70	1.2	1	0.5	3	6.8
Release	228	61.1	1451	69.7	3845	66.4	119	61.7	16	36.4
Report			5	0.2	19	0.3	1	0.5		
Supp. Report			1	0.0	1	0.0			1	2.3
TOTAL	373		2081		5794		193		44	

Table 7 Continued

Disposition	Other		Pacific Island		White		TOTALS	PERCENT
	Count	%	Count	%	Count	%		
Arrest	2	1.7	3	4.2	137	2.6	531	3.8
Cite	43	36.8	28	38.9	1506	28.4	3887	27.8
Field Inter.	2	1.7			41	0.8	142	1.0
Release	70	59.8	41	56.9	3605	68.0	9375	67.1
Report					9	0.2	34	0.2
Supp. Report					1	0.0	4	0.0
TOTAL	117		72		5299		13973	

In examining the dispositions, the percent of arrests as a disposition ranged from 0.8 percent to 11.4 percent across racial and ethnic groups. Native Americans were arrested at the highest rate, while Asians were arrested at the lowest rate. The percentage of arrests for African-Americans was 4.2, Whites was 2.6, and Hispanics was 5.0. Although Whites were arrested at a lower rate than African-Americans or Hispanics, the difference (1.6%) does not appear to be problematic given the arrest rate for Native Americans was 11.4. There perhaps are a number of circumstances in driving patterns, offender behavior, and enforcement patterns that explain these minor differences.

Most people who were stopped as a result of a patrol traffic stop were released. The range for those released was 36.4 percent to 69.7 percent. African-Americans were released at the highest rate, while Native Americans were released at the lowest rate. Whites were released at a rate of 68.0 percent and Hispanics were released at a rate of 66.4 percent. The differences in the release rates are minor. Only 3.3 percentage points separate African-Americans, Hispanics, and Whites.

Another issue that is raised frequently in traffic stop studies is the nature of police searches of vehicles. Table 8 provides a breakdown of the search behavior and their outcomes across racial and ethnic groups.

Table 8

Patrol Searches by Racial and Ethnic Group

	No Search	Negative Results Search	Drugs	Weapons	Other
Asian	169 (97.1)	4			1
African-American	796 (75.0)	243	15	3	3
East Indian	85 (93.5)	6			
Hispanic	2312 (78.7)	591	22	3	9
Native American	21 (75.0)	6			1
Other	53 (88.3)	7			
Pacific Islander	37 (92.5)	3			
White	2169 (82.3)	430	32	2	3

Before discussing the findings contained in Table 8, it is important to discuss the circumstances in which police officers search vehicles. When performing patrol stops, officers can perform a search for three reasons. First, officers can receive permission to conduct a search. Often, officers request permission to conduct a search and the driver agrees to the search. Second, an officer can conduct a search as a result of probable cause. If an officer observes a crime or the fruits of a crime, the officer may make an arrest and have probable cause to conduct a search. Finally, if the officer tows or impounds the vehicle, the officer may conduct an inventory search to record or secure valuables that are contained in the vehicle. Searches as a result of this latter category are contained in these statistics, but they may not be pertinent to traffic stops.

The data contained in Table 8 are for the last six months of the reporting period. The police department changed how it collected this data in July 2002, and the data using the new format was used to examine searches. Previously, searches where nothing was found by

officers were not separated from those where something was discovered. The new reporting format now includes whether a search was conducted, if the search did not produce any contraband, and the types of contraband recovered. For the purposes of discussion, the percentages of persons searched was computed. The contraband categories contained such low numbers that for the most part they computed under one percent. Thus, the discussion centers around searches and non-search stops.

Regardless, it appears that African-Americans are searched at a higher rate (25%) relative to other racial or ethnic group. This is relative to Hispanics with a search rate of 21.3 percent and Whites with a search rate of 17.7 percent. The difference in search rates do not appear to be dramatic indicating any racial profiling problems. Another issue relative to searches is hit rate. The relative hit rates were: African-Americans, 8.0 percent, Hispanics, 5.4 percent, and Whites, 7.9 percent. There were relative minor differences in the hit rates for the three groups (range of 2.6%). However, it should be noted that the hit rate was extremely low. In other words, of the 1,384 searches conducted by patrol officers, only 69 resulted in drugs, 8 in weapons, and 17 in other contraband or evidence. It should be noted, however, that there were 300 arrests made as a result of these traffic stops, and it can be assumed that most if not all of these arrests resulted in a search. Working from this assumption, it would mean that the hit rate for everyone searched would be 8.6 percent.

Another area of interest is the reason why officers conducted traffic stops. Table 9 provides a breakdown of the general reasons why stops were made.

Table 9

Reason for Traffic Stop by Race or Ethnic Grouping

Race/Ethnicity	APR	Municipal Code	Penal Code	Vehicle Violation
Asian	1	1	2	369
African-American	23	1	8	2049
Hispanic	62	3	21	5708
East Indian	0	1	1	191
Native-American	2	0	1	41
Pacific Islander	1	0	2	69
White	33	5	21	5240
Other	4	0	2	111

The data contained in the above table indicate that the overwhelming majority of stops were the result of a traffic violation. Indeed, when attempting to compute the percentages for each category, it was found that the percentage in most of the cells was below one. Therefore, it was decided that an examination of the percentages would be of little utility. Regardless, the data do not reveal any patterns that suggest that racial profiling is occurring. It does show that officers investigate a large number of vehicles as a result of traffic violations.

Another area of concern in traffic stop studies is the disposition or the final outcome as a result of a traffic stop. The Riverside Police Department collects this data in six general categories. The categories are arrest (where the driver or a passenger was taken into custody), cited (where the driver or passenger received a citation), field interrogated (where the officer collected information about the driver and passengers to be entered into the department's FI database), release (where the officer conversed with the driver and passengers and they were released without action), report (where the officer makes an official police report), and

supplement (where the officer makes a supplemental report involving a previously opened case). Table 10 provides a breakdown of the dispositions of traffic stops by patrol officers.

Table 10

Disposition of Stops by Race or Ethnic Grouping

Race/Ethnicity	% Arrest	% Cited	% Field Interrogated	% Release	% Report	% Supplement
Asian	0.8	37.8	0.3	61.1	0.0	0.0
African-Am.	4.2	24.6	1.2	69.7	0.2	0.0
Hispanic	5.0	27.1	1.2	66.4	0.3	0.0
East Indian	1.0	36.3	0.5	61.7	0.5	0.0
Native-Am.	11.4	43.2	6.8	36.4	0.0	2.3
Pacific Island	4.2	38.9	0.0	56.9	0.0	0.0
White	2.6	28.4	0.8	68.0	0.2	0.0
Other	1.7	36.8	1.7	59.8	0.0	0.0

A review of the above table shows that there are some minor differences across the various dispositions, especially when concentrating on enforcement actions. For example, in terms of arrest, Native Americans are arrested at the highest rate. Pacific Islanders, African-Americans, and Hispanics are arrested at a slightly higher rate than Whites and several other groups. However, African-Americans are released at a higher rate than all other groups, but their release rate is only slightly greater than the release rate for several other groups including Whites, Hispanics, Asians, and Pacific Islanders. African-Americans and Hispanics are cited at a lower rate than Whites and several other groups. It does not appear that these differences are the result of any pattern of racial profiling. Indeed, these numbers most likely are the product of the pretextual or investigative stops being performed.

EXAMINATION OF THE NATURE OF TRAFFIC STOPS

An examination of the data presented in the previous section of this report shows that African-Americans are over-represented in the traffic stop data. That is, when a group is over-represented in traffic stops, racial profiling is only one of several possible explanations. An analysis of the first year's data led to the conclusion that over-representation of African-Americans was the result of enforcement patterns coinciding with crime and disorder problems. This hypothesis is again investigated.

Community policing and problem solving dictates that police spend greater efforts in those areas that have the highest crime. This philosophy is further imbued as police respond to calls for service. That is, the police, who to some extent are incident driven, spend greater amounts of time in those areas that produce the highest number of calls for service. Thus, it is cogent to examine the relationship between calls for services and a variety of crimes and other police activities.

The first step in this process was to compute the relationship between the traffic stops and a variety of police activities including: 1) calls for service, 2) Part I Violent Crime, 3) Part I Property Crimes, and 4) calls related to drug activities. Part I crimes were used because they are collected by the Federal Bureau of Investigation as part of the national crime reports, and they represent the most serious crime in a community. Calls for service were used since they represent the best measure of police activities in any area. Finally, drug calls were included, because they represent a good proxy measure of disorder in a community or neighborhood.

The relationship between traffic stops and these activities were examined using a correlational analysis. A correlation shows the relationship between two variables and can

range from -1.0 to 1.0. A high positive number indicates a strong relationship. A high negative number shows a strong inverse relationship. Correlational coefficients around 0.0 show a weak or no relationship. The numbers of traffic stops and these police activities for each of the 133 police reporting districts were used as the units of analysis. The correlations were:

1) Traffic stops and calls for service .812

2) Traffic stops and Part I Violent Crime .863

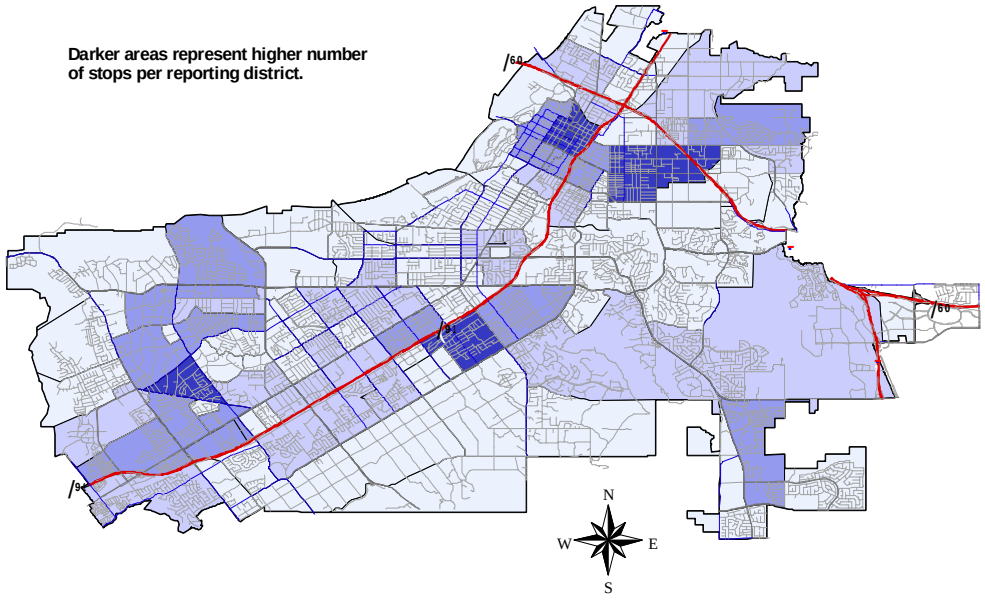
3) Traffic stops and Part I Property Crimes .684

4) Traffic stops and calls related to drug activities .781

The range of correlations was from .684 to .863. The highest correlation was for Part I Violent Crime, and the lowest was for Part I Property Crime. All of these coefficients represent extremely high correlations. They show that traffic stops are occurring in areas with a high level of crime and requests for police intervention.

Another way to examine this issue is to visually compare the geographical locations of each of these activities. To accomplish this, traffic stops, calls for service, Part I Violent Crime, Part I Property Crime, and calls related to drug activities were mapped.

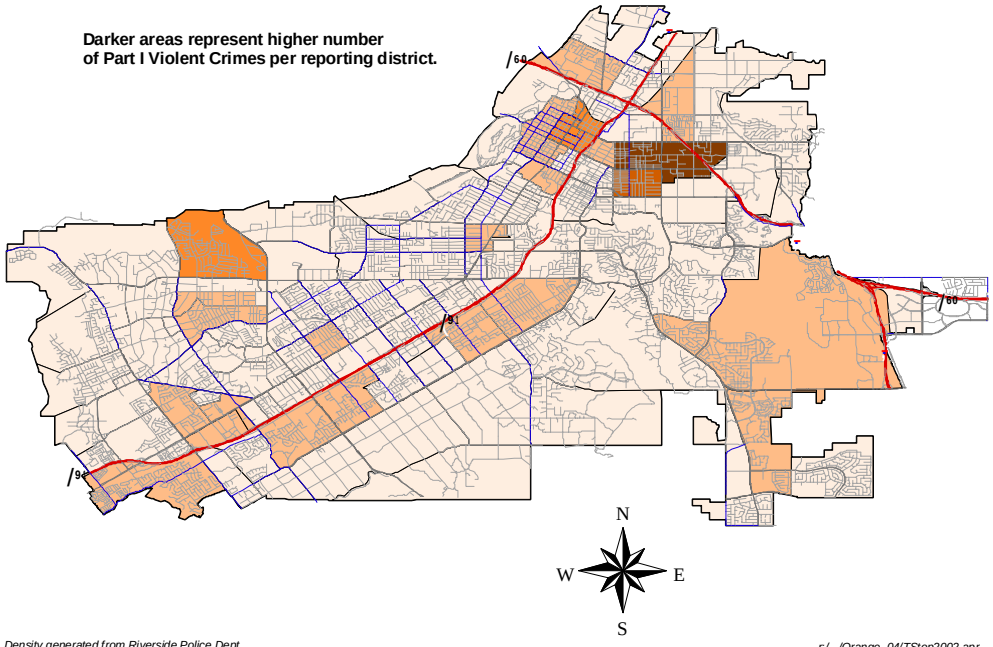
Density Map of Vehicle Stops by Patrol



Density generated from Riverside Police Dept.
Traffic Demographic statistics. 26Feb03 ljm

r:/.../Orange_04/TStop2002.apr
Layout: Patrol Stops

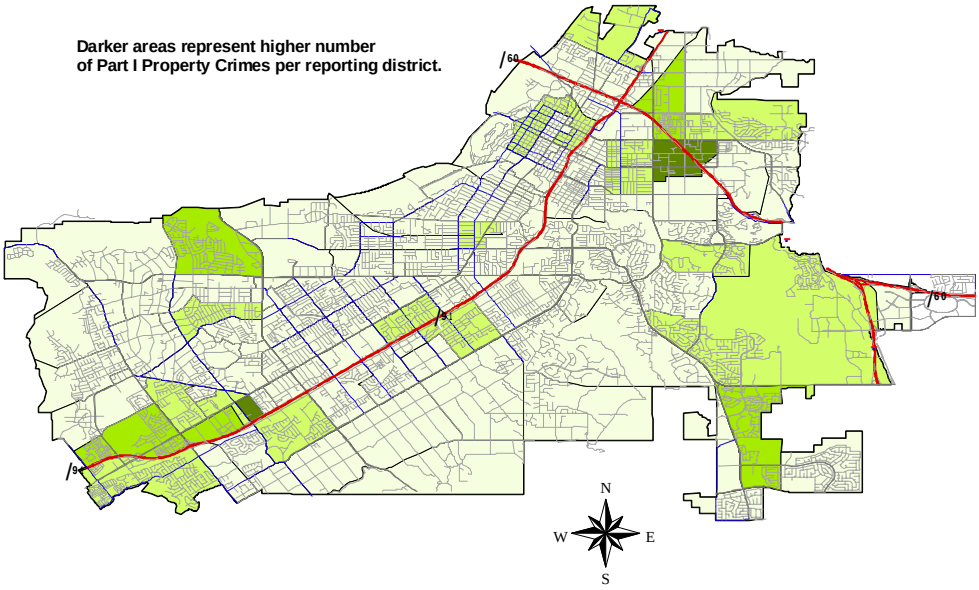
Density Map of Part I Violent Crime



Density generated from Riverside Police Dept.
Uniform Crime Reporting statistics. 26Feb03 ljm

r:/.../Orange_04/TStop2002.apr
Layout: P1 Violent

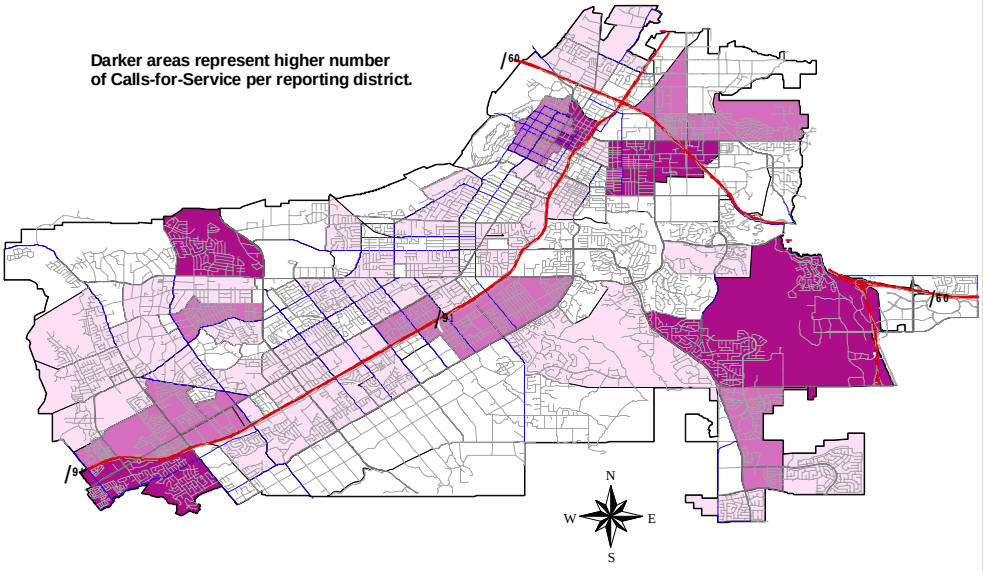
Density Map of Part I Property Crime



Density generated from Riverside Police Dept.
Uniform Crime Reporting statistics. 26Feb03 ljm

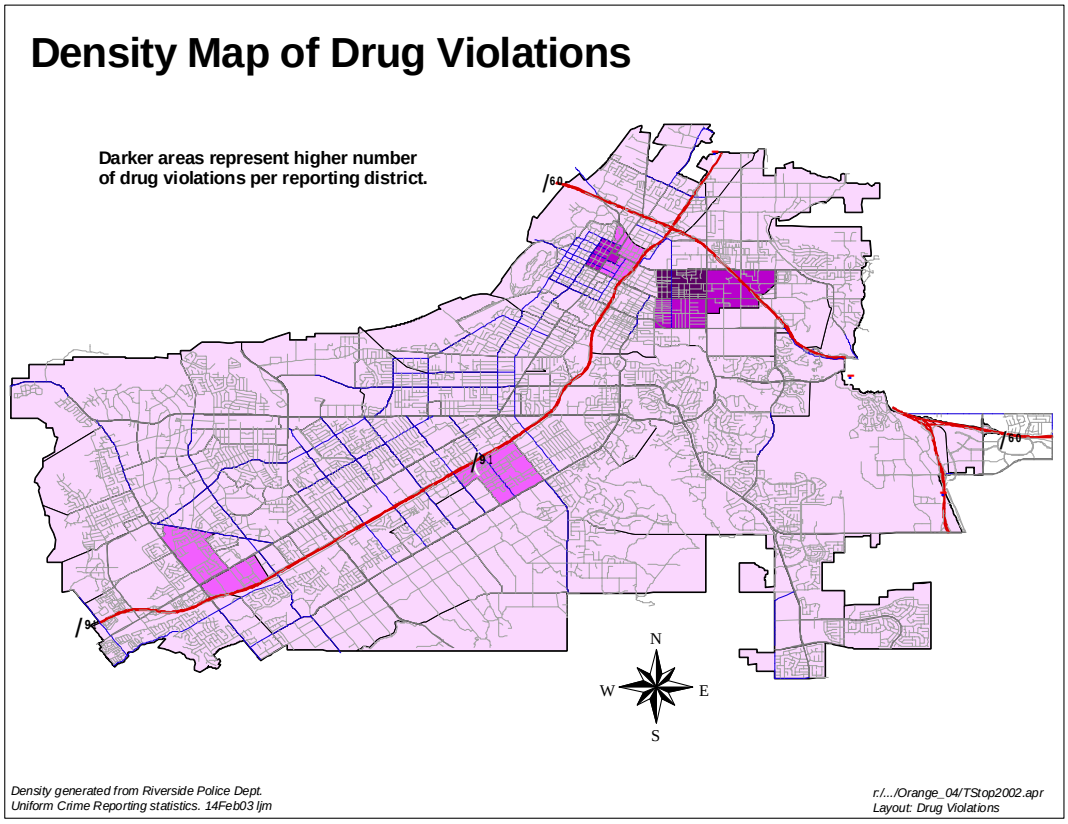
r:/.../Orange_04/TStop2002.apr
Layout: P1 Property

Density Map of Citizen-Generated Calls-for-Service



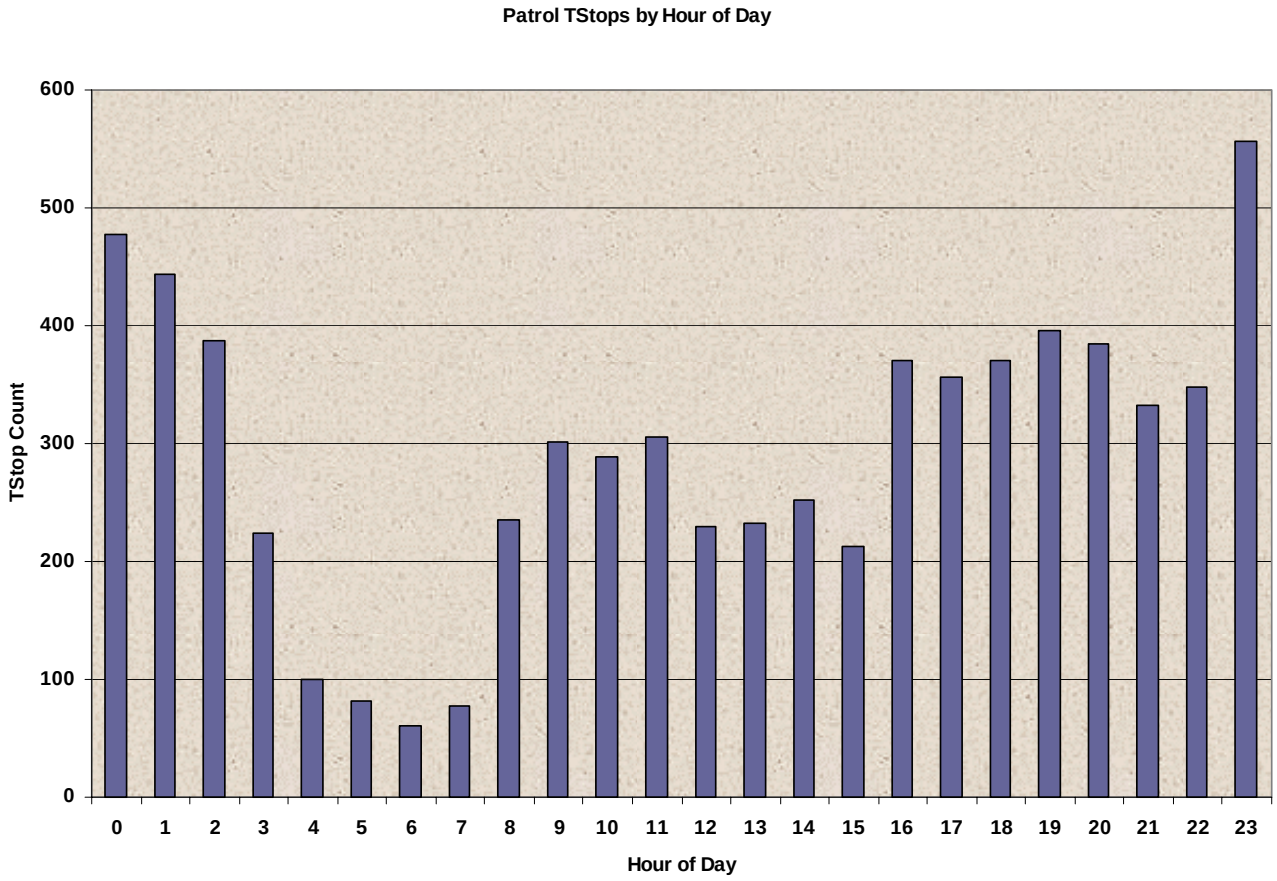
Density generated from Riverside Police Dept.
Model Patrol MIS Reporting statistics. 26Feb03 ljm

r:/.../Orange_04/TStop2002.apr
Layout: citizen CFS



The darker areas on the above maps denote higher levels of activities. An examination of the maps reveals a substantial level of overlap in the darker shaded areas demonstrating that patrol traffic stops generally occur in areas of high crime. This is consistent with the correlations, which were reported above. The maps reiterate that police traffic stops, Part I Violent Crimes, Part I Property Crimes, police calls for service, and police calls about drug offenses fairly consistently overlap the areas with the highest number of traffic stops. Given the information contained in the maps and the correlational analyses, it substantiates that the police are making traffic stops in areas where there are a number of crime and disorder problems.

For the purposes of this study, it was also important to examine when patrol conducts its traffic stops. The following bar chart shows the amount of traffic stops by patrol for each of



the 24 hours during the day.

As can be seen in the bar chart, patrol officers are making the largest number of stops between the hours of 11:00 PM and 2:00 AM. Between the hours of 4:00 PM and 11:00 PM, officers are making the second largest number of stops. The bar chart demonstrates that officers are making a greater number of traffic stops during periods that are generally

recognized as times when there are high levels of high crime and disorder.

Another way to place patrol traffic stops in perspective is to examine the number of these stops that officers make. During 2002, there were 13,973 patrol traffic stops. There were approximately 115 officers assigned to patrol and tactical duties during the same period. This means that each officer made on the average 121.5 traffic stops during the year. Considering that patrol officers work approximately 188 ten hour shift per year, each officer made less than one traffic stop (.64) per shift. In other words, although the aggregate number of traffic stops may give the impression that patrol officers are making large numbers of stops, they, in reality, do not. It would reason that if racial profiling were indeed a problem, there would be many more stops by patrol officers.

SUMMARY DISCUSSION OF RACE DATA

The above sections of this report examine traffic stops in the City of Riverside within the context of race and ethnicity. The purpose of the examination is to investigate the possibility of officers engaging in racial profiling. Before summarizing the findings, it is important to discuss the mechanics of racial profiling. As noted previously in this report, the California Legislature has defined racial profiling as,

> . . . the practice of detaining a suspect based on a broad set of criteria which casts suspicion on an entire class of people without any individualized suspicion of the particular person being stopped.

This definition does not mean that police officers must have parity across different groups of people when conducting traffic stops, although some have attempted to suggest that this is an accurate way of determining if racial profiling exists. Rather, the language in the law

prevents the police from stopping citizens solely based on a broad set of criteria such as race, gender, or ethnicity. Obviously, such a requirement is extremely difficult to prove or disprove. In other words, the decision to stop a vehicle is an individual officer decision, and only the officer knows and understands his or her rationale when stopping the vehicle. It should also be noted that officers do not arbitrarily stop vehicles as all stops are made once a violation of a law has been observed by the officer.

When disparity occurs in traffic stops across race, gender, or ethnicity, it behooves administrators to investigate to determine if there are plausible explanations for such discrepancies. This essentially occurred here. This research attempted to examine traffic stops and account for any patterns that emerged.

The first step was to examine all traffic stops conducted by officers. These results indicated that some groups were stopped more frequently than others. Second, traffic stops by patrol and other street units were dis-aggregated from those conducted by the traffic unit. This was done because traffic officers, in general, have a different motivation making traffic stops. An examination of the traffic unit stops showed that racial and ethnic groups were represented fairly proportionately in the number of stops.

An examination of the stops by patrol found that African-Americans were over-represented in terms of their population. Once this finding was established, efforts were made to discover any reasons or causes of this phenomenon. An examination of prior studies, especially those in Sacramento and San Diego, revealed that the rationale for such discrepancies was the result of police enforcement patterns. That is, police departments tend to employ higher levels of policing in areas where the highest levels of crime, disorder, and calls

for service occur. This was investigated in Riverside by comparing a variety of crime measures with traffic stops. The analysis revealed that police officers tended to make the greatest number of traffic stops in high crime areas. Although this finding does not disprove that racial profiling exists, it does substantiate logical and acceptable reasons for some levels of disparity.

In summary, it appears that the over-representation of minorities in traffic stops is the result of enforcement patterns interacting with crime patterns. The data supports this phenomenon. There is nothing in the data to suggest that officers in Riverside are engaging in any form of racial profiling as defined by the California Legislature.

TRAFFIC STOPS AND GENDER

One of the issues in the Stipulated Judgment was whether there were any disparities in the rate of stops based on gender. Table 11 provides 2002 traffic stop data aggregated by gender.

Table 11

Traffic Stops by Gender

STOPS BY UNIT	FEMALE	MALE
Traffic	4488 (45.3%)	5411 (54.7%)
Patrol	3081 (22.0%)	10892 (78.0%)
Total	7569 (31.7%)	16,303 (68.3%)

During the 2002 calender year, there was a total of 7,569 females stopped and 16,303 males stopped by Riverside police officers. Since only 31.7 percent of the traffic stops were for females, it appears that they are under-represented in the traffic stops based on their

representation in the population. The data indicate that females are under-represented in stops both by patrol and traffic, although the distribution of stops by traffic more closely approximates the gender percentages in the population. This finding, perhaps, can be explained by the fact that nationally, females are involved in less crime and generally have a better driving record than their male counterparts.

Another issue regarding gender is the question of whether there are disparities in the number of searches of females. Table 12 provides information relative to the number of stops and searches by gender.

Table 12

Searches by Gender

SEARCHES BY UNIT	FEMALE	MALE
Patrol	292 (9.5%)	2105 (19.3%)
Traffic	10 (0.2%)	23 (0.4%)
Total	302 (4.0%)	2128 (13.1%)

As noted in the above table, females were searched at less than half the rate compared to males. It is interesting that traffic officers performed a low number of searches for both males and females. For the year, they performed a total of 33 searches. This attests to their traffic enforcement function. On the other hand, patrol conducted a total of 2,397 searches. This number is the result of patrol being involved in a number of investigative or pretextual stops. These data do not indicate anything out of the ordinary. Moreover, only 10.2 percent of all stops resulted in a search indicating that only a relatively few searches were conducted.

Another issue regarding gender was the disposition of the stops. The department

collected data using the following categories: arrest, citation, field interrogation, release, report, and supplemental report. Table 13 presents these dispositions by gender.

Table 13

Disposition by Gender

Disposition	Female	Male
Arrest	75 (1.0%)	537 (3.3%)
Citation	5049 (66.7%)	7724 (47.4%)
Field Interrogation	27 (0.4%)	143 (0.9%)
Release	2409 (31.8%)	7868 (48.2%)
Report Taken	8(0.1%)	27 (0.2%)
Supplemental Report	1 (0.0%)	4 (0.0%)
TOTAL	7569 (100%)	16303 (100%)

An examination of the percentages in the above table reveals that the numbers are fairly consistent across gender with the exception of citation. This difference is explained by the fact that patrol performs fewer investigative or pretextual traffic stops of females relative to males. The traffic unit, on the other, hand has a more even distribution of stops and citations across gender. This results in females receiving a larger percentage of citations overall.

In terms of gender, the data indicate that males receive a higher level of police attention than females. Females tend to be under-represented in all categories of police activities relative to males. This most likely is the result of females in general being involved in less crime and usually having better driving records.

SUMMARY

This document reports on an examination of the traffic stops for the Riverside Police Department to determine if there were any patterns of racial profiling. The report is divided into two major areas: race/ethnicity and gender. After an extensive examination of the data, there is no evidence that the Riverside Police Department is engaging in racial profiling. Although there is evidence that African-Americans are over-represented in the department's traffic stops, it appears that this is the result of police officers engaging in higher levels of enforcement in high crime areas.